

A Taxonomic Revision of the Japanese Species of the Genus
Pselaphogenius (Coleoptera, Staphylinidae, Pselaphinae)
Part 1. Species from Western Kyushu

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Abstract Five species of the genus *Pselaphogenius* from western Kyushu is revised; only one of them, *P. debilis* (Sharp) (Nagasaki City) was previously described, and the remaining four are new to science, namely, *P. patrius* sp. nov. (western part of Saga Pref. and northern part of Nagasaki Pref.), *P. seihiensis* sp. nov. (Nishi-Sonogi Peninsula), *P. shintaro* sp. nov. (Taradake Mts.) and *P. shimabaranus* sp. nov. (Shimabara Peninsula and Taradake Mts.). Remarkable geographical variation of *P. patrius* sp. nov. is presented.

Key words: Staphylinidae, Pselaphinae, *Pselaphogenius*, new species, Kyushu, Japan.

Introduction

Besuchet (1968) regarded the genus *Pselaphogenius* Reitter as a synonym of the genus *Dicentrius* Reitter. Newton & Chandler (1989) also adopted this taxonomic treatment in their world catalog of the generic names. Under the title of “Taxonomic study on the genus *Dicentrius* from Japan”, I started the study of this genus from Japan and its first part dealing with two species from the Tsushima and Gotô Islands was already published (Nomura, 1998). However, Besuchet (1999) revised this genus and its relatives and correctly pointed out that some Asian species described under the generic name *Dicentrius* should be reclassified into the genus *Pselaphogenius*. In fact, all the specific name combined with *Dicentrius* by Nomura (1995, 1996) are quite different from the type species, *Dicentrius merclii* Reitter. For the purpose of correct identification, I prefer to give a new title to the present study and begin from the first part, again.

In the present part, five species from western Kyushu are dealt with. They are remarkably diversified in this small area and a striking geographical variation is recognized in a new species on the endophallic structure of the male genitalia.

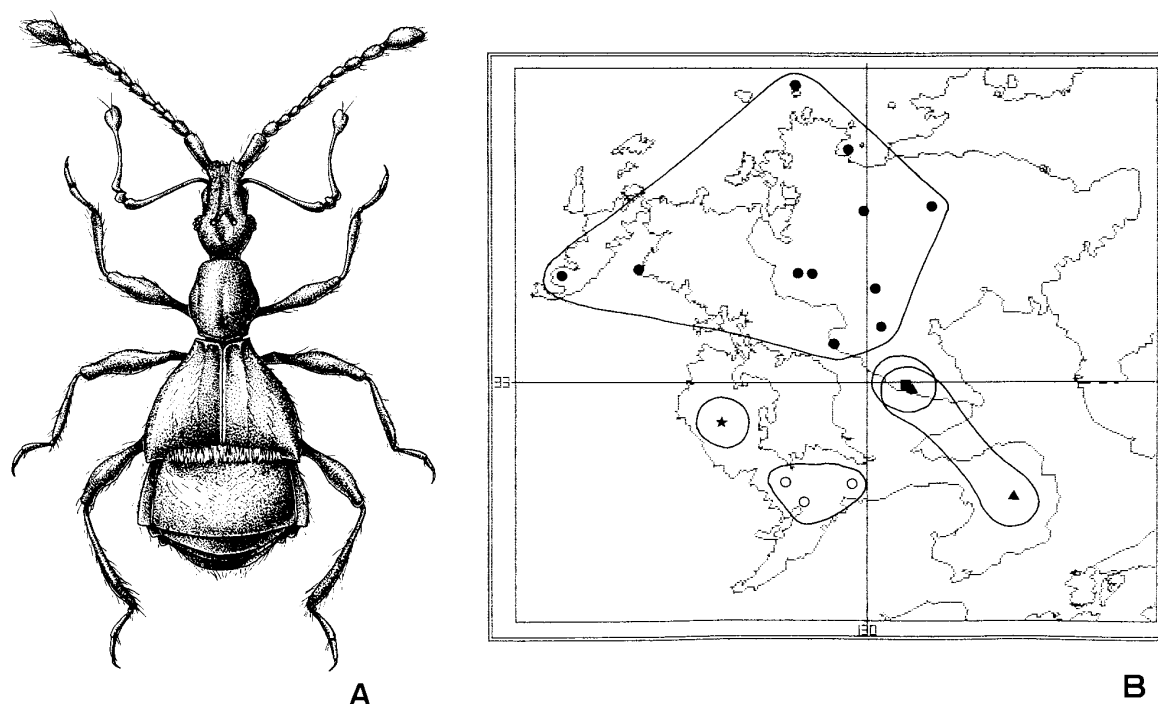


Fig. 1. A: *Pselaphogenius debilis* (Sharp), habitus; B: distribution map of *Pselaphogenius* spp. Black circles indicate collecting sites of *P. patrius* sp. nov.; white circles indicate those of *P. debilis* (Sharp); black star indicates that of *P. sehiensis* sp. nov.; black square indicates that of *P. shintaro* sp. nov.; black triangles indicate those of *P. shimabaranus* sp. nov.

***Pselaphogenius patrius* sp. nov.**

[Japanese name: Matsuura-higenaga-arizukamushi]

Male. Length 1.45–1.55 mm. Width 0.60–0.63 mm. Body medium-sized, strongly narrowed anteriorly, reddish brown, maxillary palpi light brown, shiny in pronotum, elytra and abdomen.

Head elongate, covered with reticulate microsculpture, clypeus short, invisible in dorsal view, trapezoidal, sparsely covered with long hairs, frons strongly convex, gently constricted behind antennal bases, with a U-shaped antero-median notch at apex, and a shallow median and a pair of narrow and short lateral grooves, each lateral groove running from antennal base to dorsal tentorial pits, vertex weakly convex, with a shallow median depression, postgenae weakly rounded. Eyes each ovoid, composed of 8–9 facets. Antennae slender, reaching base of pronotum, sparsely pubescent, 1st segment large and tubular, about twice as long as wide, slightly thickened distad, 2nd slightly narrower than 1st, ovoid, 3rd to 7th subequal, each smaller than 2nd, longer than wide, slightly thickened distad, 8th slightly shorter than 7th, ovoid, 9th to 10th subequal in length, each twice as long as 8th, ovoid, 11th the largest, nearly ovoid, relative length (width) of each segment from base to apex: 1.5 (0.7): 0.9 (0.6): 0.7 (0.5): 0.7 (0.5): 0.7 (0.5): 0.7 (0.5): 0.7 (0.5): 0.6 (0.5): 1.1 (0.7): 1.1 (0.8):

2.2 (1.2). Maxillary palpi very long and slender, 1st segment very narrow and elongate, tubular, weakly curved near base, 2nd long, very slender in basal half, then gently thickened distad, 3rd very short and thick, 4th largest and elongate, very narrow in basal 2/3, swollen in apical 1/3, with a short sulcus, a fusiform flattened area and a short palpal spine at apex, minutely setose at the flattened area.

Pronotum slightly longer than wide, round-sided, covered with minute reticulate microsculpture and sparsely haired on dorsal surface, with a pair of basi-lateral foveae at basal 1/4, and a shallow median depression in basal part. Elytra wider than long, narrowed basally, trapezoidal, weakly convex on dorsal surface, shallowly depressed along median line, each elytron densely covered with thick setae on posterior margin, with a large basal fovea, an indistinct adsutural sulcus and a broad longitudinal carina, and with a row of setae along median line, a row on the longitudinal carina and two rows on its lateral side. Legs slender, femora each swollen medially, tibiae slender, each thickened distally, tarsi very slender.

Abdomen larger than elytra, widest at posterior part of 4th segment, smooth on dorsal surface, 4th tergite very broad, rectangular, with a pair of distally broadened paratergites, 5th to 6th subequal in length, each very short, 7th longer than 6th, transverse, 8th short and trapezoidal.

Male genitalia (Fig. 2A–D) elongated and ovoid in dorsal view; parameres slender and asymmetrical, left paramere slightly broader than the right, with a few short ctenidia at apex, right paramere simply rounded at apex; median lobe thick and rounded at base, nearly truncate at apex, with a large and hook-like apical spine on ventral side of the apex, and with a small subapical spine at the right side, apical orifice large and opening leftwards, ventral process long and slender, almost parallel-sided in ventral view, strongly bent ventrally near apex; endophallus broadened leftwards in basal part, narrowed and rectangularly bent leftwards near the middle, then sharply curved rightwards and broadened near apex, with 3 denticles at apex.

Female. Length 1.51–1.60 mm. Width 0.61–0.65 mm. Ninth abdominal sternite (Fig. 2E) weakly sclerotized, consisting of apical lobe and basal sclerite, apical lobe large and lamellar, with a pair of narrow lateral sclerites and an elongate median sclerite, basal sclerite composed of transverse and laterally bifurcate ventral part and lamellar and arcuate proximal part.

Geographical variation. The typical form described above are collected at Mt. Mifuneyama, Takeo City, Mt. Tōsenzan, Shiota-chō and Mt. Kokuzōsan, Ureshinomachi in Saga Prefecture. The shape of the endophallus of the male genitalia is shown by Fig. 2D. In the population of Kurokamiyama Hills including Mts. Kurokamiyama, Seirasan (Fig. 3C), the endophallus does not bend medially and the apical part is broadened and tridentate. In those of Higashi-Matsuura region including Kakarajima Is., Chinzei-chō and Ohshima, Karatsu City (Fig. 3B), it is scarcely bent medially and is having two processes at the apex; the right process short and dull at the apex, and the left is long, S-shaped and sharpened at the apex. In that

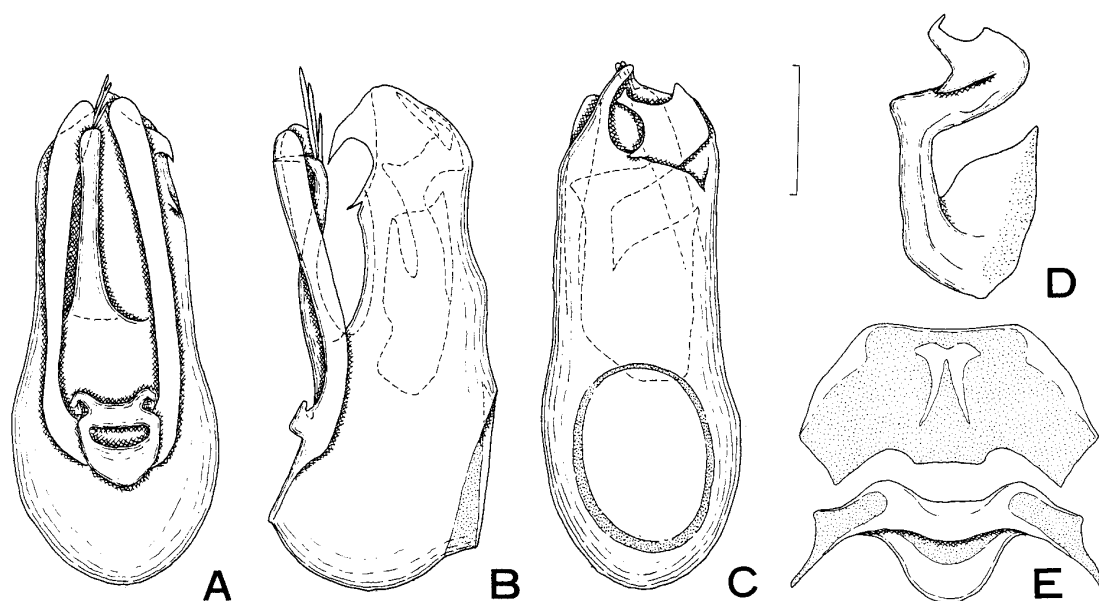


Fig. 2. *Pselaphogenius patrius* sp. nov. A: male genitalia in ventral view; B: ditto, in lateral view; C: ditto, in dorsal view; D: endophallus; E: female 9th abdominal sternite in ventral view. Scale: 0.1 mm.

of Kuroiwa, Ouchi-chô (Fig. 3D), its apical part is similar to that of the Kurokamiyama Hills, but it is clearly bent medially. On the specimen collected from Amagawa, Kyûragi-machi in the Sefuri Hills (Fig. 3E), it is more sharply curved in the middle part, and its apical part strongly convex and quadrangular. In the populations of Kitamatsuura-gun and Hirado Is., Nagasaki Prefecture (Fig. 3A), its apical part looks like head of a swan, slender and S-curved.

Holotype, male (preserved in National Science Museum, Tokyo), Mt. Mifuneyama, Takeo City, Saga Pref., 27. V. 1984, S. Nomura leg. Paratypes. 3 males, 2 females, same data as holotype; 2 males, 2 females, same locality as holotype, 16. IV. 1985, S. Nomura leg.; 1 male, 4 females, same locality as above, 5. V. 1986, S. Nomura leg.; 1 male, Mt. Tôsenzan, Shiota-chô, Saga Pref., 21. VI. 1997, M. Nishida leg.; 5 males, 1 female, Mt. Kokuzôsan, Ureshino-machi, Saga Pref., 6. X. 1997, S. Nomura leg.

Specimens examined. 2 males, 1 female, Mt. Seirasan, Imari City, Saga Pref., 8. III. 1983, S. Nomura leg.; 2 males, same locality as above, 28. V. 1984, S. Nomura leg.; 1 female, Mt. Seirasan, Nishi-Arita-chô, Saga Pref., —. XI. 1992, S. Nomura leg.; 1 male, Ryûmon Valley, Nishi-Arita-chô, Saga Pref., 18. II. 1995, M. Nishida leg.; 1 male, Mt. Kurokamiyama, Yamauchi-chô, Saga Pref., 15. II. 1996, M. Nishida leg.; 4 males, 3 females, Kakarajima Is., Chinzei-chô, Saga Pref., 3. IV. 1983, S. Nomura leg.; 4 males, Ohshima, 150 m alt., Karatsu City, Saga Pref., 20. IV. 1999, S. Nomura leg.; 1 male, 2 females, Kuroiwa, Ouchi-chô, Saga Pref., 19. III. 1988, S. Nomura leg.; 1 male, Amagawa, Kyûragi-machi, Saga Pref., 20. VI. 1982, S. Nomura leg.; 4

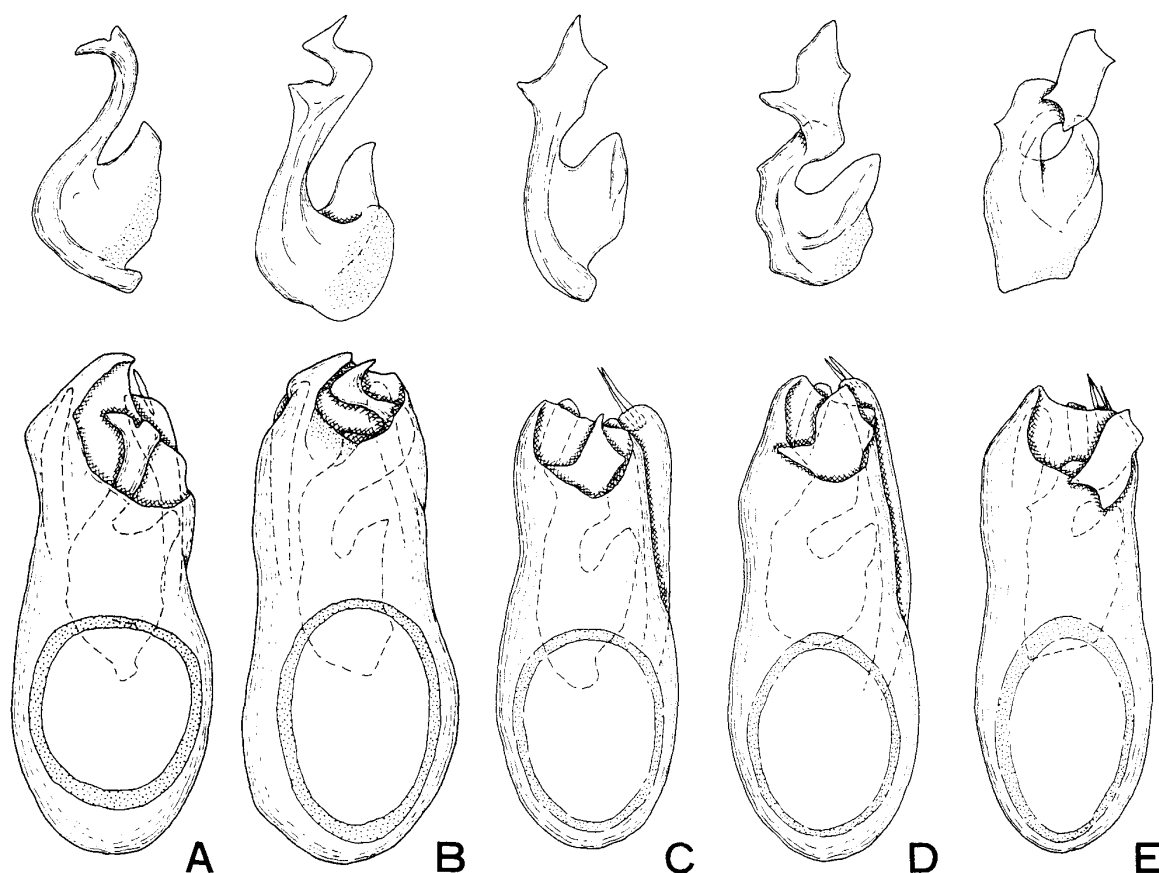


Fig. 3. Male genitalia (above: endophallus; below: median lobe and parameres in dorsal view) of *Pselaphogenius patrius* sp. nov. A: male from Shitonezaki, Nagasaki Pref.; B: male from Kakarajima Is., Saga Pref.; C: male from Mt. Seirasan, Saga Pref.; D: male from Kuroiwa, Saga Pref.; E: male from Amagawa, Saga Pref. Scale: 0.1 mm.

males, 8 females, Shitonezaki, Shikamachi-chô, Nagasaki Pref., 1.IV.1988, S. Nomura leg.; 3 males, 3 females, Mt. Byôbudake, 300 m alt., Hirado Is., Nagasaki Pref., 19.III.1998, S. Nomura leg.

Distribution. Western Kyushu (western part of Saga Prefecture and northern part of Nagasaki Prefecture).

Remarks. This new species is characterized by the dull apex of median lobe and the left paramere carrying a few ctenidia at the apex. A remarkable geographical variation is recognized on the shape of endophallus as shown above. It is similar to that of *D. tubipenis* K. Sawada in Tsushima Is.

Etymology. The Latin adjective “*patrius*” meaning “something of homeland” is referring to the author’s hometown, Takeo City, Saga Prefecture, of the type locality of this species.

***Pselaphogenius debilis* (Sharp)**

[Japanese name: Arame-higenaga-arizukamushi]

(Fig. 1A)

Pselaphus debilis Sharp, 1883, Trans. ent. Soc. London, 1883: 328; Raffray, 1904, Anns. Soc. ent. Fr., 73: 451; Raffray, 1908, Gen. Ins., 64: 307; Raffray, 1911, Coleopt. Cat., (27): 138; Park, 1948, Bull. Chicago Acad. Sci., 8: 216.

Pselaphopsis debilis: Jeannel, 1958, Mém. Mus. Hist. nat., Paris, (A), 18: 108; Nakane, 1963, Icon. ins. Japon. Colr. nat. ed., 2: 102.

Pselaphogenius debilis: Besuchet, 1961, Mitt. schweiz. ent. Ges., 34: 40; Nomura, 1989a, Check List Jpn. Ins., Fukuoka, 1: 292; Nomura, 1989b, Nagasakiken-no-seibutsu, Nagasaki: 186; Besuchet, 1999, Revue suisse Zool., 106: 61.

Dicentrius debilis: Nomura, 1995, Koganemushi, Nagasaki, (57): 33; Nomura, 1996, Sagaken-no-seibutsu, Saga: 270.

Male. Length 1.45–1.54 mm. Width 0.59–0.65 mm. Habitus and external features very similar to those of *patrius*. Male genitalia (Fig. 4A–D) already described by Besuchet (1961).

Female. Length 1.45–1.50 mm. Width 0.61–0.63 mm. External features very similar to those of male. Ninth abdominal sternite (Fig. 4E–F) weakly sclerotized, apical lobe transverse and lamellar, basal sclerite X-shaped, formed by a V-shaped apical sclerite and a pair of well sclerotized and stout basilateral arms. Genital plate (Fig. 4G) weakly sclerotized, T-shaped in ventro-proximal view.

Specimens examined. 5 males, 7 females, Mt. Iwayasan, Nagasaki C., Nagasaki Pref., 29–31. V. 1987, S. Nomura leg.; 1 male, Mt. Yagami-Fugendake, Nagasaki C., Nagasaki Pref., 8. III. 1998, S. Nomura leg.

Distribution. Western Kyushu (Nagasaki City).

Remarks. This is the species of this genus first recorded from Japan. Its type locality is near Suwa Temple, Nagasaki (Suwa shrine, Nagasaki City) after Sharp's description. Besuchet (1961) illustrated the male genitalia of this species from Suwa. It is characterized by the larger right paramere armed with ctenidia and the well projected apex and the rightwardly opened apical orifice of the median lobe.

***Pselaphogenius seihiensis* sp. nov.**

[Japanese name: Seihi-higenaga-arizukamushi]

Male. Length 1.36 mm. Width 0.56 mm. Very similar to *patrius* in the external features. Male genitalia (Fig. 4H–K) distinctly asymmetrical; parameres long, elongate and broadened distally, right paramere rounded at apex, with many long and bold ctenidia at internal side near apex, left paramere slightly longer than the right, nearly truncate at apex, with a few very short setae at apex; median lobe rounded at base, with subparallel lateral side, bearing 2 large spines near apex, ventral spine broad at base, extending leftwards and hook-like at apex, dorsal spine thickened at

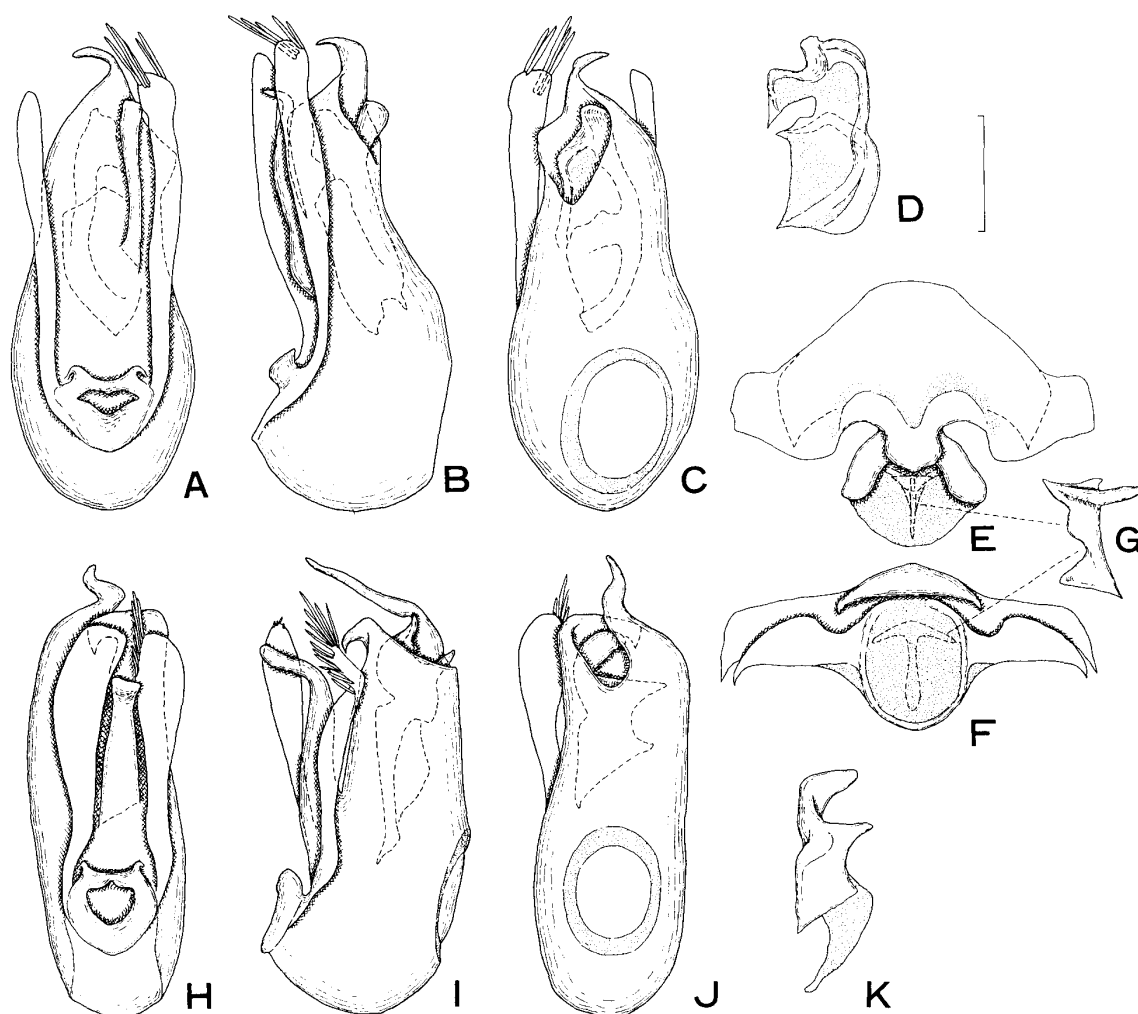


Fig. 4. A–G: *Pselaphogenius debilis* (Sharp); H–K: *P. seihiensis* sp. nov. A, H: male genitalia in ventral view; B, I: ditto, in lateral view; C, J: ditto, in dorsal view; D, K: endophallus; E: female 9th sternite and genital plate in ventral view; F: ditto, in basal view; G: genital plate. Scale: 0.1 mm.

base, then sharpened distally, apical part gently S-curved in ventral view, slender and straight in lateral view, basal nodule well projected, ventral process short and broad, strongly curved ventrad near apex, apical orifice narrow, opening between ventral and dorsal spines; endophallus lamellar, twisted and constricted near the middle, with 2 projections on left side.

Female. Unknown.

Holotype, male (preserved in National Science Museum, Tokyo), Iwaseto Vall., alt. 380 m, Sotome-chô, Nishi-Sonogi Peninsula, Nagasaki Pref., 18. V. 1997, S. Nomura leg.

Distribution. Western Kyusyu (Nishi-Sonogi Peninsula).

Remarks. This new species is very distinct in having apically broadened para-

meres, hook-like ventral spine and gently S-curved dorsal spine in the apical part of the median lobe. These characteristics show that this is clearly different from *debilis* at species level. However, some characters, namely, the right paramere with long and bold ctenidia and the rightwards opened apical orifice indicate its affinity with *debilis*.

Etymology. This specific name refers to the type locality, the Nishi-Sonogi Peninsula, which is sometimes contracted to “Seihi”.

***Pselaphogenius shintaro* sp. nov.**

[Japanese name: Taradake-higenaga-arizukamushi]

Male. Length 1.43–1.45 mm. Width 0.63 mm. Very similar to *patrius* and *debilis* in external structure. Male genitalia (Fig. 5A–D) slightly thicker than in *debilis*; parameres similar to those of *debilis*, but the right paramere with more ctenidia at only mesal side of the apex; median lobe dull at apical part, with short and slender apical and large and basally sharpened subapical spines on ventral side of the apex, ventral process located on median line in ventral view (right side in *debilis*); endophallus short and thick, gently S-curved, weakly broadened and twisted at apex.

Female. Length 1.49–1.51 mm. Width 0.64–0.66 mm. Ninth abdominal sternite (Fig. 5E) similar to that of *debilis*.

Holotype, male, Mt. Kyôgatake, Kashima C., Saga Pref., 6. IV. 1983, S. Nomura leg. Paratypes. 1 male, 1 female (preserved in National Science Museum, Tokyo), same data as holotype; 1 male, same locality as holotype, 19. X. 1986, S. Nomura leg.

Distribution. Western Kyushu (Taradake Mts.).

Remarks. The new species *shintaro* described from the Taradake Mts. differs from the other species of the neighbouring areas by the nearly straight right paramere, the short apical spine of the median lobe and the simple and broad endophallus.

Etymology. The specific name is associated with the personal name “Shintaro”. *Shintaro* is a legendary handsome young bonze in ancient times who lived in Kinsenji Temple near the summit of Mt. Taradake, and has been famed in the local folk-song “Take-no-Shintaro-san”.

***Pselaphogenius shimabaranus* sp. nov.**

[Japanese name: Shimabara-higenaga-arizukamushi]

Male. Length 1.46–1.50 mm. Width 0.63–0.65 mm. Very similar in habitus and external features to *patrius*, *debilis*, *shintaro*, and the other species of the genus. Male genitalia (Fig. 5F–I) similar to that of *debilis*, but right paramere distinctly longer than the left, strongly curved leftwards, broadened near apex, then narrowed distally in apical 1/7, with 6 to 7 ctenidia along external side of the apical part; apical

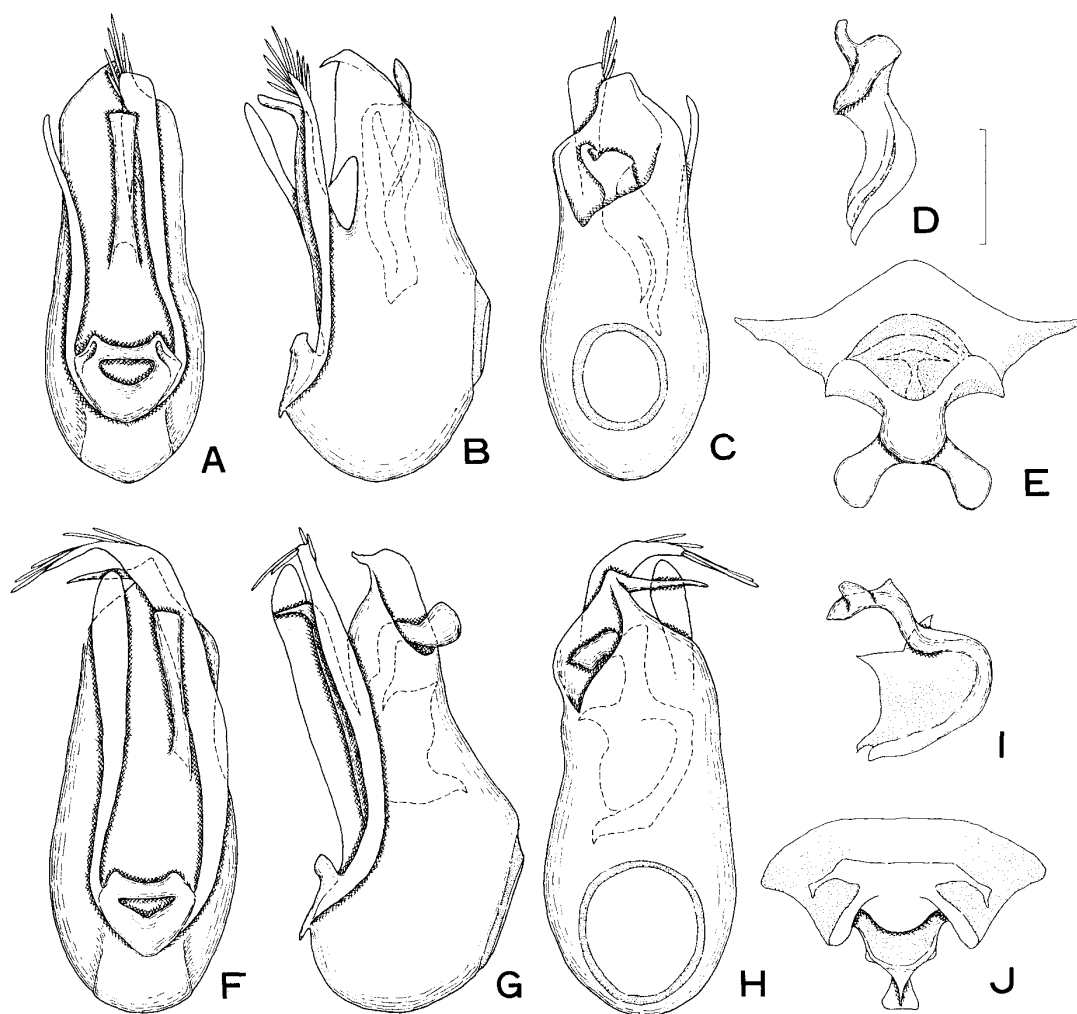


Fig. 5. A–E: *Pselaphogenius shintaro* sp. nov.; F–J: *P. shimabaranus* sp. nov. A, F: male genitalia in ventral view; B, G: ditto, in lateral view; C, H: ditto, in dorsal view; D, I: endophallus; E, J: female 9th sternite and genital plate in ventral view. Scale: 0.1 mm.

spine of median lobe long and slender, folded at base, then sharpened leftwards; endophallus more broadened at base than in *debilis*, strongly narrowed in apical half, thickened and bifurcate at apex.

Female. Length 1.41–1.46 mm. Width 0.63 mm. Ninth abdominal sternite (Fig. 5J) weakly sclerotized, basilateral arms slenderer than in *debilis*.

Holotype, male (preserved in National Science Museum, Tokyo), Unzen, Nagasaki Pref., 21. IX. 1985, T. Tanabe leg. Paratypes. 4 males, 2 females, same data as holotype; 1 male, Mt. Kyôgatake, 900 m alt., Kashima City, Saga Pref., 17. III. 1998, S. Nomura leg.

Distribution. Western Kyushu (Shimabara Peninsula, Taradake Mts.).

Remarks. This new species is easily distinguished by the longer and strongly arcuate right paramere with long ctenidia, the long and sharpened apical spine mak-

ing a right angle to the median axis of the median lobe, and the twisted endophallus of the male genitalia. This species is collected from Kyôgatake, almost at the same point as the type locality of *P. shintaro* sp. nov. It means that the distributional range of this species partly overlaps that of *shintaro*.

***Pselaphogenius* spp. indet.**

Specimens examined. 1 female, Oshima Is., Danjo Isls., Nagasaki Pref., 11. IX. 1986, M. Ejima leg.; 1 female, Mt. Hachimandake, 770 m alt., Takeo City, Saga Pref., 16. III. 1998, S. Nomura leg.; 1 females, Mt. Kunimiyama, 700–750 m alt., Imari City, Saga Pref., 16. III. 1998, S. Nomura leg.; 1 female, Mt. Kunimiyama, Sechibaru-chô, Nagasaki Pref., 7. X. 1997, S. Nomura leg.; 1 female, Kinsenji, Mt. Taradake, Takaki-chô, Nagasaki Pref., 16. IV. 1994, S. Nomura leg.; 1 female, Todoroki Vall., Takaki-chô, Nagasaki Pref., 1. VI. 1987, S. Nomura leg.; 4 females, Mt. Kyôgatake, 880 m alt., Tara-chô, Saga Pref., 21. IV. 1999, S. Nomura leg.; 1 female, Mt. Hoshigahara, Moriyama-chô, Nagasaki Pref., 16. V. 1997, S. Nomura leg.

Remarks. As to the *Pselaphogenius* in western Kyushu, specific and the geographical variation cannot be distinguished based on only the female specimens.

Literature Cited

- Besuchet, C., 1961. Psélaphides paléarctiques especes nouvelles et notes synonymiques (Coleoptera). *Mitt. Schweiz. Ent. Ges.*, **34**: 30–42.
- Besuchet, C., 1968. Psélaphides des Canaries et de Madère (Coleoptera). *Mitt. Schweiz. Ent., Ges.*, **36**: 27–46.
- Besuchet, C., 1999. Psélaphides paléarctiques. Notes taxonomiques et faunistiques (Coleoptera Staphylinidae Pselaphinae). *Revue. Suisse Zool.*, **106**: 45–67.
- Newton, A. F., Jr. & D. S. Chandler, 1989. World catalogue of the genera of Pselaphidae (Coleoptera). *Fieldiana, Zool.* (N. S.), (53): 1–93.
- Nomura, S., 1995. A review on pselaphid beetles of Nagasaki Prefecture. *Koganemushi, Nagasaki*, (57): 29–35. (In Japanese.)
- Nomura, S., 1996. Pselaphid beetles of Saga Prefecture. In Matsuura, H. et al. (eds.), *Sagaken-no-seibutsu, Saga*, pp. 263–279. (In Japanese.)
- Nomura, S., 1998. A taxonomic study on the genus *Dicentrius* from Japan (Coleoptera, Staphylinidae, Pselaphinae) Part 1, The Tsushima and Gotô Islands. *Mem. Natn. Sci. Mus., Tokyo*, (30): 29–35.